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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,744	10/23/2003	Richard E. Kessler	200301781-2	8266

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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EXAMINER

PUENTE, EMERSON C

ART UNIT	PAPER NUMBER
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2113

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/691,744	Applicant(s) KESSLER ET AL.	
	Examiner Emerson C. Puente	Art Unit 2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-10,14-18 and 25-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-10,14-18 and 25-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is made Non-Final. Applicant's amendments necessitated new grounds of rejection presented in this office action.

Claims 2-4, 11-13, and 19-24 have been cancelled.

Claims 1, 5-10, and 14-18 and 25-28 have been examined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 5-10, 14-18, and 25-28 are rejected under 35 U.S.C. §102(b) as being clearly anticipated by US Patent No. 5,138,611 of Carn et al. referred hereinafter "Carn".

In regards to claim 1, Carn discloses:

a first processor and a second processor coupled together to permit messages to be transmitted from one processor to another processor (see figure 1 and column 8 lines 1-15).

said first processor having at least one timer that expires when a message is not sent from the first processor in a predetermined amount of time. Carner discloses when a message is not routed within a certain period of time, a timer expires (see column 16 lines 37-48 and column 17 lines 35-53).

wherein said first processor can send a plurality of different message types to said second processor (see column 15 lines 48-62).

and said second processor includes a separate timer associated with each of said message types to expire when a message of the message type is not sent in a predetermined amount of time from said second processor. Carner discloses a plurality of devices, indicating a second processor (see column 8 lines 9-15). Carner further discloses when a message is not routed within a certain period of time, a timer expires (see column 16 lines 37-48 and column 17 lines 35-53).

In regards to claim 5, Carner discloses a queue timer (see column 17 lines 40-55). It is necessary for queue timer to have a register to store a timeout value, thus indicating at least one register associated with each timer to permit the timer to be programmed (see column 6 lines 1-6).

In regards to claim 6, Carner discloses:

wherein each processor has at least one port connection to another processor and wherein each processor further includes a port timer associated with said port connection (see column 16 lines 37-48 and column 17 lines 35-53).

In regards to claim 7, Carner discloses:

wherein each port timer increments if the associated port is being used to send messages (see column 16 lines 37-48 and column 17 lines 35-53).

In regards to claim 8, Carner discloses:

wherein each port timer is reset when a message is sent from the port (see column 16 lines 37-48 and column 17 lines 35-53).

In regards to claim 9, Carner discloses:

wherein each port is reset when it receives a signal from a processor that receives a message from the port that indicates that the receiving processor has freed up an entry in an input buffer (see column 16 lines 37-48 and column 17 lines 35-53).

In regards to claim 10, Carner discloses a first processor that can be coupled to other processors to form a multiprocessor system and can exchange messages with the other processor in the system, said first processor comprising:

router logic that can be coupled to at least one other processor and said router logic having at least one timer that expires when a message is not sent from said first processor in a predetermined amount of time. Carner discloses when a message is not routed within a certain period of time, a timer expires (see column 16 lines 37-48 and column 17 lines 35-53).

wherein said first processor can send a plurality of different message types to other of said processors (see column 15 lines 48-62).

each such other processor includes a separate timer associated with each of said message types to expire when a message of the associated message type is not sent from the processor in a predetermined amount of time. Carner discloses a plurality of device, indicating another processor (see column 8 lines 9-15). Carner further discloses when a message is not routed within a certain period of time, a timer expires (see column 16 lines 37-48 and column 17 lines 35-53).

In regards to claims 14, Carn discloses a queue timer (see column 17 lines 40-55). It is necessary for queue timer to have a register to store a timeout value, thus indicating at least one register associated with each timer to permit the timer to be programmed

In regards to claim 15, Carn discloses wherein each processor has at least one port connection to another processor and wherein each processor further includes a port timer associated with said port connection (see column 16 lines 37-48 and column 17 lines 35-53).

In regards to claim 16, Carn discloses wherein each port timer increments if the associated port is being used to send messages (see column 16 lines 37-48 and column 17 lines 35-53).

In regards to claim 17, Carn discloses wherein the port timer is reset when a message is sent from the port (see column 16 lines 37-48 and column 17 lines 35-53).

In regards to claim 18, Carn discloses wherein the port timer is reset when a message is sent from the port that indicated that the receiving processor has freed up an entry in an input buffer (see column 16 lines 37-48 and column 17 lines 35-53).

In regards to claim 25, Carn discloses:

resetting a first timer in a processor when a message of a first type is sent, wherein the first timer expires if a message of the first type is not sent within a predetermined amount of time (see column 16 lines 37-48 and column 17 lines 35-53).

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resetting a second timer in said processor when a message of a second type is sent, wherein the second timer expires if a message of the second type is not sent within a predetermined amount of time (see column 8 lines 9-15 and column 16 lines 37-48 and column 17 lines 35-53).

if the first or second timer expires, disabling transmission of messages of the corresponding type from said processor (see column 16 lines 37-48 and column 17 lines 35-53).

In regards to claim 26, Carn discloses incrementing a first timer while a buffer holds a message of the first type (see column 16 lines 37-48 and column 17 lines 35-53).

In regards to claim 27, Carn discloses incrementing a second timer while a buffer holds a message of the second type (see column 16 lines 37-48 and column 17 lines 35-53).

In regards to claim 28, Carn discloses:

incrementing a third timer while a buffer holds a message of a third type, resetting a third timer when a message of the third type is sent if the third timer expires, disabling transmission of the messages of the third type to the buffer without simultaneously disabling transmission of messages of the first and second types (see column 16 lines 37-48 and column 17 lines 35-53).

Claims 1, 5-10, 14-18, and 25-28 are rejected under 35 U.S.C. §102(e) as being clearly anticipated by US Patent No. 6,353,616 of Elwalid et al. referred hereinafter "Elwalid".

In regards to claim 1, Elwalid discloses:

a first processor and a second processor coupled together to permit messages to be transmitted from one processor to another processor (see figure 1 and 2 and column 3 lines 58-67).

said first processor having at least one timer that expires when a message is not sent from the first processor in a predetermined amount of time. Elwalid discloses upon processing a message, resetting the refresh timer and propagating (or sending) the message (see column 4 lines 38-41). Thus when a message is not processed and not propagated (or sent), the refresh timer doesn't reset and thus expires, indicating a first processor having at least one timer that expires when a message is not sent from the first processor in a predetermined amount of time.

wherein said first processor can send a plurality of different message types to said second processor. Elwalid discloses receiving UPDATE, PATH, RESV, and TEARDOWN messages (see column 5 lines 10-15), indicating a plurality of different message types.

and said second processor includes a separate timer associated with each of said message types to expire when a message of the message type is not sent in a predetermined amount of time from said second processor (see column 4 lines 38-41).

In regards to claim 5, Elwalid discloses:

at least one register associated with each timer to permit the timer to be programmed (see column 6 lines 1-6).

In regards to claim 6, Elwalid discloses:

wherein each processor has at least one port connection to another processor and wherein each processor further includes a port timer associated with said port connection (see figure 1 and 2 and column 4 lines 45-54)

In regards to claim 7, Elwalid discloses:

wherein each port timer increments if the associated port is being used to send messages (see column 4 lines 20-23).

In regards to claim 8, Elwalid discloses:

wherein each port timer is reset when a message is sent from the port (see column 4 lines 34-44)

In regards to claim 9, Elwalid discloses:

wherein each port is reset when it receives a signal from a processor that receives a message from the port that indicates that the receiving processor has freed up an entry in an input buffer (see figure 2 and column 5 lines 13-20).

In regards to claim 10, Elwalid discloses a first processor that can be coupled to other processors to form a multiprocessor system and can exchange messages with the other processor in the system, said first processor comprising:

router logic that can be coupled to at least one other processor (see figure 1 and 2 and column 3 lines 59-65);

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said router logic having at least one timer that expires when a message is not sent from said first processor in a predetermined amount of time. Elwalid discloses upon processing a message, resetting the refresh timer and propagating (or sending) the message (see column 4 lines 38-41). Thus when a message is not processed and not propagated or sent, the refresh timer doesn't reset and thus expires, indicating said router logic having at least one timer that expires when a message is not sent from said first processor in a predetermined amount of time.

wherein said first processor can send a plurality of different message types to other of said processors. Elwalid discloses receiving UPDATE, PATH, RESV, and TEARDOWN messages (see column 5 lines 10-15), indicating a plurality of different message types.

each such other processor includes a separate timer associated with each of said message types to expire when a message of the associated message type is not sent from the processor in a predetermined amount of time (see column 4 lines 38-41).

In regards to claims 14, Elwalid discloses at least one register associated with each timer to permit the timer to be programmed (see column 6 lines 1-6).

In regards to claim 15, Elwalid discloses wherein each processor has at least one port connection to another processor and wherein each processor further includes a port timer associated with said port connection (see figure 1 and 2 and column 4 lines 45-54).

In regards to claim 16, Elwalid discloses wherein each port timer increments if the associated port is being used to send messages (see column 4 lines 20-23).

In regards to claim 17, Elwalid discloses wherein the port timer is reset when a message is sent from the port (see column 4 lines 34-44).

In regards to claim 18, Elwalid discloses wherein the port timer is reset when a message is sent from the port that indicated that the receiving processor has freed up an entry in an input buffer (see figure 2 and column 5 lines 13-20).

In regards to claim 25, Elwalid discloses:

resetting a first timer in a processor when a message of a first type is sent (see column 4 lines 34-36), wherein the first timer expires if a message of the first type is not sent within a predetermined amount of time (see column 4 lines 40-44);

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resetting a second timer in said processor when a message of a second type is sent (see column 4 lines 34-36), wherein the second timer expires if a message of the second type is not sent within a predetermined amount of time (see column 4 lines 40-44);

if the first or second timer expires, disabling transmission of messages of the corresponding type from said processor (see column 4 lines 20-25 and column 5 lines 13-20)

In regards to claim 26, Elwalid discloses incrementing a first timer while a buffer holds a message of the first type (see column 4 lines 66-67 and column 5 lines 13-16).

In regards to claim 27, Elwalid discloses incrementing a second timer while a buffer holds a message of the second type (see column 4 lines 66-67 and column 5 lines 13-16).

In regards to claim 28, Elwalid discloses:

incrementing a third timer while a buffer holds a message of a third type (see column 4 lines 66-67 and column 5 lines 13-16);

resetting a third timer when a message of the third type is sent (see column 4 lines 38-40).

if the third timer expires, disabling transmission of the messages of the third type to the buffer without simultaneously disabling transmission of messages of the first and second types (see column 4 lines 20-44).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 25 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Horst in further view of US Patent No. 5,924,119 of Sindhu et al. referred hereinafter "Sindhu".

In regards to claim 25, Horst discloses:

resetting a first timer in a processor when a message of a first type is sent, wherein the first timer expires if a message of the first type is not sent within a predetermined amount of time and resetting a second timer in said processor when a message of a second type is sent, wherein the second timer expires if a message of the second type is not sent within a predetermined amount of time. Horst discloses setting or resetting a request timer when a request, is being sent (see column 28 lines 65-67). Horst further discloses if multiple outstanding request are desired to be managed, additional ones of request timers-one for each outstanding requests could be used (see column 29 lines 13-16), indicating a first and second timer, wherein the first and second timer expires if a message of the first or second type is not sent within a predetermined amount of time. Horst also discloses access request could be a read request or write request (see column 29 line 23), indicating a message of a first and second type.

Horst further discloses when the timer is not reset and the timer expires, a timeout signal is sent to notify the processor of an absence of a response to a particular transaction (see column 29 lines 10-13). However, Horst fails to disclose if the first or second timer expires, disabling transmission of messages of the corresponding type.

Sindhu discloses if the first or second timer expires, disabling transmission of messages of the corresponding type. Sindhu cites "to prevent congestion, there is a second flow control mechanism that may be invoked by any client device to demand a system-wide hold of the arbitrator. A demand for system wide hold temporary disables the arbiter from granting the bus for the transmission of request packets" (see column 9 lines 8-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Horst wherein if the first or second timer expires, disabling transmission of messages of the corresponding type. A person of ordinary skill would have been motivated to modify the teaching of Horst because Horst discloses buffering of packets to be transmitted (see column 20 line 64-65) and blocking further messages sent by the processor would prevent congestion by stopping continued buffering of packet to be transmitted, as per teaching of Sinhu (see column 9 lines 8-20).

Response to Arguments

Applicant's arguments filed August 8, 2005 have been fully considered but they are not deemed to be persuasive.

Applicant's arguments with respect to claim 1, 5-10, and 14-18 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument "Hence in Elwalid, although the packets are dropped from the input queue 220, the dropping operation only affects only currently queued packets and does not represent a 'disabling of transmission of the corresponding type' as recited in independent claim 25" (see middle paragraph page 7), examiner respectfully disagrees.

Elwalid discloses termination of packet flow (see column 4 lines 20-25), which implies disabling of transmission, thus indicating disabling of transmission of the corresponding type. Furthermore, Elwalid discloses dropping the corresponding or current queued packets (see figure 5 lines 13-20). If the corresponding or current queued packets are dropped, then they are not being transmitted, indicating disabling of transmission of the corresponding type.

In response to applicant's argument "Horst fails to disclose a timer that will expire if the message type corresponding to the timer is not sent from the processor including the timer," (see bottom paragraph page 8), examiner respectfully disagrees.

The claim cites "resetting a first timer in a processor when a message of a first type is sent, wherein the first timer expires if a message of the first type is not sent within a predetermined amount of time and resetting a second timer in said processor when a message of a second type is sent, wherein the second timer expires if a message of the second type is not sent within a predetermined amount of time" Horst discloses setting or resetting a request timer when a request, is being sent (see column 28 lines 65-67). Horst further discloses if multiple outstanding request are desired to be managed, additional ones of request timers-one for each outstanding requests could be used (see column 29 lines 13-16), indicating a first and second timer, wherein the first and second timer expires if a message of the first or second type is not sent within a predetermined amount of time. Horst also discloses access request could be a read request or write request (see column 29 line 23), indicating a message of a first and second type. Examiner maintains his rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


See PTO 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emerson C. Puente whose telephone number is (571) 272-3652. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W. Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ECP
11/6/05


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